for commercial cultivation in the States of Andhra Pradesh, Karnataka, Tamil Nadu, Haryana, Punjab, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra by Genetic Engineering Approval Committee (GEAC) of the Ministry of Environment and Forests. The area under Bt. cotton as reported by States during the last four years is given here under:

States	2002-03	2003-04	2004-05	2005-06
A.P.	3762	5400	70400	330000
M.P.	1470	13200	85119	134639
Gujarat	9031	41200	124463	149317
Maharashtra	12280	21600	159600	488000
Karnataka	2160	3000	33906	27909
Tamil Nadu	370	7600	11856	17800
Punjab	-	-	-	72000
Haryana	-	-	-	12000
Rajasthan	-	-	-	2281
TOTAL:	29073	92000	492544	1233946

The area under Bt. cotton for 2006-07 was 34.40 lakh ha. provisionally.

No directions have been issued to States to promote Bt. cotton hybrids. However, awareness workshops have been organized in the States to educate stake holders, including farmers, about various aspects of Bt. cotton.

Post harvest technology

3200. SHRIMATI N.P. DURGA: Will the Minister of AGRICULTURE be pleased to state:

(a) what are the aims and objectives of post harvest technology;

(b) how bringing the scheme of Post Harvest Technology under Technology Mission for Oil Seeds, Pulses and Maize has helped in stepping up the production of oil seeds, pulses and maize; and

(c) the details of indigenous technologies developed through R&D and the details of demonstration units set up?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI KANTILAL BHURIA): (a) The main aim of post harvest technology is to reduce post harvest losses and add value to the produce as well as the residues and byproducts resulting into higher income and employment and healthier environment. The specific objectives of post harvest technology are as follows:—

1. To develop processes, equipment and pilot plants for management and value addition of agriculture produce.
2. To undertake studies on techno-economic feasibility and economical viability of post harvest industries.
3. To create post harvest technology consciousness and transfer of proven technologies in production catchments and to monitor its effects on economic and social development.
4. To generate income and employment through adoption of proven technologies and equipment.

(b) Bringing post harvest technologies under the scope of TMOP is leading to the reduction of post harvest losses and, thereby, increase in the availability of the oil seeds, pulses and maize. This is also facilitating the farmers of oil seeds, pulses and maize to increase their income through post harvest loss reduction and value addition. The increased income is encouraging the farmers to improve the productivity of the oil seeds, pulses and maize.

(c) Several institutions in the country including Central Institute of Post Harvest Engineering and Technology (Ludhiana) and other ICAR institutes, State Agricultural Universities, Indian Grain Management and Research Institute have been developing indigenous post harvest management and value addition technologies for different commodities and regions. The technologies relate to optimum time of harvesting, harvesting techniques, collection, cleaning, grading, drying, cooling, storage, milling and packaging. A list of technologies developed through R&D is given in Statement-I (*See* below).

These Technologies are being demonstrated for their usefulness by the centres of the All India Coordinated Research Project (AICRP) on post harvest technology spread all over the country.

A list of selected demonstration units set up under the activities of the All India Coordinated Research Project in Post Harvest Technology, (ICAR) is given in Statement-II.

Statement-I

Indigenous post harvest technologies / equipment developed through R&D

1. Mini dal mill
2. Chilli seed extractor
3. Fruit grader
4. Waste fired dryer
5. Evaporatively cooled structure for storage of perishables
6. Honey based toffees and carrot candies
7. Bael based beverages
8. Dehydrated buffalo meat powder
9. Fruit bar technology (Papaya and tomato)
10. Buffalo Meal pickle
11. Buffalo meat Fresh Sausage Technology
12. Buffalo meat Emulsion Sausage Technology
13. Vivek thresher-cum-pearler
14. Process for Preparation of cane jaggery in crystal form
15. Preparation of cane jaggery cubes / blocks
16. Double grating Anakapalle jaggery furnace for increased heat use efficiency
17. 2-in-1 Maize sheller-cum-Sunflower thresher
18. Arecanut dehusker
19. 3-in-1 mini Groundnut decorticator, Sunflower thresher and Maize sheller
20. Pedal operated coconut dehusker
21. Cardamom dryer

22. Safe storage of pulses using sand layer
23. White pepper making unit
24. Tamarind dehuller-cum-deseeder
25. Groundnut seed storage in coastal areas of Karnataka
26. Turmeric polisher
27. Multi purpose grain mill
28. Pedal cum Power operated grain cleaner
29. CIAE Dhall mill
30. Groundnut decorticator, hand operated
31. Solar cabinet dryer for vegetables
32. Straw baler
33. Manual double screen cleaner for cereals and pulses
34. Vegetable dehydrator
35. Grain pearler for coarse cereals and pulses
36. Cashew apple RTS, squash, jam/jelly
37. Osmo dehydrated Pineapple slices/rings and tidbits
38. Turmeric/Ginger washer
39. Dehumidified air dryer
40. Bael (Stone apple) slicer
41. Stone apple beverages
42. Low cost double pan furnance for jaggery making by small/marginal farmers
43. Herbal clarificants for sugarcane juice in jaggery making
44. House hold insect trap
45. Four Roller Sugarcane Crusher
46. Bottling of Sugarcane juice

47. Household paddy parboiling unit
48. Improve Farm level Turmeric boiler
49. Production of tomato paste
50. Fluidized bed dryer for Mushroom
51. Pepper Thresher
52. Pulper-cum-washer for coffee
53. Aonla Pricking Machine
54. Fodder Preservation Unit (Silo) for arid region
55. Improved '*Karai*' storage structure for dry fodder
56. Modified Ensiling Process for arid region
57. Ber grading machine
58. Cauldron paddy parboiling technique
59. Value added products from ginger
60. Process for storage of ginger rhizomes in fresh form
61. RCC ring bin for paddy storage
62. Feed Block Making Machine
63. Process for Essential Oil from Cumin
64. Process for enhanced Shelf Life of Kesar Mango
65. Cleaner-cum-Grader for Cumin
66. Agriculture wastes-fired dryer for Red Chillies
67. Development of Shell fired Copra Dryer
68. Tender coconut punch and Cutter
69. Process for production of coconut chips
70. Production of snow ball tender nut
71. Design of solar cum electrical dryer with bio-fuel as third source of energy

72. Solar tunnel dryer
73. Grain puffing machine
74. Bamboo Cement Bin (for paddy storage)
75. Recirculatory tray dryer
76. Village level milk sterilizer
77. Production of snack products from kodo millet
78. Production of quicker cooking parboiled rice
79. Betel leaf oil extractor
80. Liquid Jaggery Production Process
81. Churner for defrothing during jaggery making
82. Modified Hardness tester for solid jaggery
83. Cane Juice Boiling Pan
84. Jaggery based caramelized toffees, biscuits/cookies
85. Sugarcane Juice Filtration System
86. Sugarcane Juice collection and settling tank
87. Boiling Pan Tipping Mechanism
88. Okra plant stalk powder for clarification
89. Pomegranate Seed Extractor
90. Sapota Fruit Grader
91. Mango Fruit Grader
92. Recirculatory Solar Dryer (Red chillies)
93. House Hold Evaporative Cooler (for fruits and vegetables)
94. Mechanical Fruit Washer
95. Jaggery cubes moulding frame
96. Drying-cum-storage bin for jaggery
97. IISR Two Pan Furance with forced draft system

98. Improved triple pan furnace
99. Single Drum Rotary Screen Grain Pre-cleaner
100. Farm level fruit and vegetable washing machine
101. Electric-cum-Battery Heated Uncapping knife for honey
102. Trolley Drier for grains and vegetables
103. Hand operated potato peeler
104. Plant based grain protectant
105. Groundnut decorticator
106. Pedal operated Fig Pressing Machine
107. Production of Sapota Powder
108. Value added product (fish pickle) using low value fresh water fishes (Tilapia sp.)
109. Tungabhadra Winnower
110. Natural convection solar dryer (Mini-multi rack type)
111. Forced convection solar drying system
112. Value added product by using low value Marine and Fresh water fish
113. Technology for extraction of kernel oil from apricot stones/seeds
114. Hand operated cassava chipping machine
115. Cassava rasper
116. Motorised chipping machine
117. Pedal operated cassava chipping machine
118. Feed granulator
119. Mobile starch extraction unit
120. Pilot plant for liquid adhesive from cassava starch
121. Maize dehusker sheller

122. Garlic bulb breaker

123. Process technology for Garlic flakes & powder

124. Technology for ginger and turmeric processing

125. Garlic peeling machine

Statement-II

List of a few selected Demonstration Units for Post Harvest Technology under All India Coordinated Research Project on Post Harvest Technology (ICAR)

1. Agro Processing Centre at Shri Ramdas Raut, Hiwarkhed (Rup) Tq. Telhara Distt. Akola
2. Agro Processing Centre at Shri Deepak Shinde's farm, Nimkhed (Bazar), Tq. Anjangaon Surji Distt. Amaravati
3. Uttaranchal Javik Utpadak and Pradyogiki and Vikas Swayatya Sahkarita, Kotwal Gaon, Takula
4. M/s Jaya Durga Food Products, At/P.O.: Bramheswar Patna, Tankapani Road, Distt.-Khurda, Orissa
5. ADARA, At/P.O.: Pipili, Distt: Puri, Orissa
6. Choudhary Harbilas Ray Agro Processing Complex, Chakdana Near Phillour, Punjab
7. S. Santokh Singh Agro Processing Complex, V&PO Rode, Near Bagha Purana, Moga, Punjab
8. Agro-Processing Centre, Village Sansera; tehsil Railmagra distt. Rajsamand (Rajasthan)

Special Products

3201. MS. SUSHILA TIRIYA: Will the Minister of AGRICULTURE be pleased to state:

(a) whether it is a fact that there has been disagreement over the number of farm products/commodities that the country would designate as Special Products; and

(b) if so, the reasons therefor?